Energy Storage R.10-12-007 Cost-Benefit Analysis Models

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Grid Planning & Reliability

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Remote Access

WebEx Information
Meeting Number: 740-132-105
Meeting Password: e-storage
Go to:
https://van.webex.com/van/j.php?ED=1895
76572&UID=491292852&PW=NNjBkYTE3
ZGM0&RT=MiM0

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*Note: *6 to mute/unmute*

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Workshop Goals

- To introduce models and tools for conducting cost-benefit analysis of specific energy storage Use Cases:
  - EPRI/E3   Energy Storage Valuation Tool (ESVT)
  - DNV KEMA   ES Select & Distribution Modeling

- To review and discuss operational considerations and assumptions that should be incorporated in the analysis, and

- To provide status update of the development of various storage Use Cases.

Agenda for the Workshop

Action Item		Time Allotted	Clock
Introductions		15 minutes	9:30 am – 9:45 am
Review Use Cases		60 minutes	9:45 am –10:45 am
Break		15 minutes	10:45 am –11:00 am
EPRI/E3 Methodology		60 minutes	11:00 am – 12:00 pm
Lunch		60 minutes	12:00 pm – 1:00 pm
Use Case Examples EPRI/E3		60 minutes	1:00 pm – 2:00 pm
Break		15 minutes	2:00 pm – 2:15 pm
DNV KEMA -- ES Select		30 minutes	2:15 pm – 2:45 pm
Use Case Examples DNV KEMA		60 Minutes	2:45 pm – 3:45 pm
Wrap Up		15 minutes	3:45 pm – 4:00 pm

Elements of Energy Storage Use Cases

1. Overview Section
2. Use Case Description
3. Cost/Benefit Analysis
4. Barriers Analysis & Policy Options
5. Real World Example
6. Conclusion and Recommendations

Analysis of Energy Storage Use Cases

- Commercial readiness

- Operational viability

- Benefit streams
  - Benefits monetize through existing markets/mechanisms
  - If not, how should they be valued?

- Cost-effectiveness

- Most important barriers preventing /slowing deployment of ES

- Policy options to address identified barriers

- Consider procurement target or other policies to encourage ES

Prioritized Scenarios/Use Cases

Scenario/Use Case	Primary End Use	Lead
Generator-sited Storage		**SCE**
– Co-located with VER	Renewables integration	
– Co-located with Conventional Gen	Peaking capacity	
– Co-located with Wholesale DG	Renewables integration	
Bulk "Generation"		**PG&E**
– Bulk Storage	Energy/Ramping	
– Storage as "Peaker"	Ancillary Services/Capacity/Energy	
– Ancillary Services	Ancillary Services	
Distributed Storage		**SDG&E**
– Distributed Peaker	Energy cycling to meet peak	
– Distribution Storage	Defer upgrades	
– Community Energy Storage	Local service reliability	
Demand-Side Management End-use bill management		**CESA**
– Permanent load shift		
– On-site renewables with storage		
– PV Charging		**CPUC**

Thank You!

**For further information related to R.10-12-007
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